

Date: Sat, 12 Jun 93 04:30:11 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #718
To: Info-Hams

Info-Hams Digest Sat, 12 Jun 93 Volume 93 : Issue 718

Today's Topics:

<None>
Daily Solar Geophysical Data Broadcast for 11 June
HF Rigs
Labelling of layers in Ionisphere
SB200 power supply problems - help please.
VHF Ant Meas - More
West Coast VHF Conf Ant Meas

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available (by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Sat, 12 Jun 1993 04:06:03 GMT
From: usc!howland.reston.ans.net!newsserver.jvnc.net!yale.edu!cs.yale.edu!
ccsua.ctstateu.edu!doane@network.UCSD.EDU
Subject: <None>
To: info-hams@ucsd.edu

References: <C88EDD.DC@pacifier.rain.com> <C8Bo6L.A4F@fc.hp.com>
I am a blind professor and have been following this discussion
with interest. I am not used to posting to the newsgroups so
forgive me if I don't properly follow some detail of the posting
tradition. In a previous article, Perry Scott writes:

>Maybe we could ask the FCC for a trial period to test the concept of
>blind VEs. If so, we should seriously attempt to cheat the system and
>understand if there are any fatal flaws and where accomodation can be
>made.

Mike Freeman replies:

>Better yet, don't worry about it until and unless it proves to
>be a problem!

In my own work, I always use proctors for tests and exams and I can assure you that the excellent students I pick (not taking the course) would not want anyone to earn something without working hard at it. Conscientious students who really work hard for something will protect that virtue to the end! Therefore, such conscientious individuals could indeed serve as proctors in a VE session.

I disagree with Mike about taking the time to have the reader read the answers as he checks them in Braille. The idea of the examiner providing the correct template for the reader/grader seems more appropriate to me.

Mike did such a good job that there is no sense of my repeating his points--thanks Mike and thanks to Perry for such excellent questions. There are just some things we do a little differently--but the end result is the same--integrity and accuracy!--73--Betsey Doane, K1EIC SM CT <Doane@CCSUA.CTSTATEU.EDU> Professor of Mathematics / Computer Science Housatonic Community Technical College Bridgeport, CT

Date: 12 Jun 93 03:09:58 GMT
From: news-mail-gateway@ucsd.edu
Subject: Daily Solar Geophysical Data Broadcast for 11 June
To: info-hams@ucsd.edu

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 162, 06/11/93
10.7 FLUX=101.8 90-AVG=117 SSN=044 BKI=4222 2212 BAI=009
BGND-XRAY=B6.0 FLU1=2.9E+05 FLU10=1.2E+04 PKI=3222 2232 PAI=009
BOU-DEV=052,014,012,011,010,012,008,010 DEV-AVG=016 NT SWF=00:000
XRAY-MAX= C5.7 @ 1023UT XRAY-MIN= B5.3 @ 1241UT XRAY-AVG= C1.2
NEUTN-MAX= +000% @ 0000UT NEUTN-MIN= +000% @ 0000UT NEUTN-AVG= +0.0%
PCA-MAX= +0.0DB @ 0000UT PCA-MIN= +0.0DB @ 0000UT PCA-AVG= +0.0DB
BOUTF-MAX=55392NT @ 0034UT BOUTF-MIN=55340NT @ 1729UT BOUTF-AVG=55363NT
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+075,+000,+000
GOES6-MAX=P:+128NT@ 1503UT GOES6-MIN=N:-122NT@ 0238UT G6-AVG=+099,-025,-063
FLUXFCST=STD:095,090,085;SESC:095,090,085 BAI/PAI-FCST=015,015,010/015,015,010
KFCST=3334 3332 2224 3222 27DAY-AP=012,012 27DAY-KP=2133 3243 3512 3223
WARNINGS=*SWF;*PROTON
ALERTS=
!!END-DATA!!

NOTE: The Effective Sunspot Number for 10 JUN 93 is not available.

The Full Kp Indices for 10 JUN 93 are not available.

Date: Sat, 12 Jun 1993 01:06:37 GMT
From: usc!howland.reston.ans.net!newsserver.jvnc.net!newsserver.egr.uri.edu!orca!
swamik@network.UCSD.EDU
Subject: HF Rigs
To: info-hams@ucsd.edu

Hi Everyone!

This summer I would like to purchase a used HF Rig for under 350 dollars.

I'll obviously have to buy one of those old Yaesus or Heathkits.
Does anyone have any suggestions, prices, availability info, etc.

Please send replies to swamik@orca.ele.uri.edu
or KB1AMB @ KA1RCI.RI.USA.NA

Name hr is Swami.
73s de KB1AMB

Date: 11 Jun 93 19:17:14 PDT
From: swrinde!cs.utexas.edu!wupost!darwin.sura.net!newsserver.jvnc.net!yale.edu!
nigel.msen.com!fmsrl7!destroyer!cs.ubc.ca!unixg.ubc.ca!ucla-mic!MVS.OAC.UCLA.EDU!
CSMSCST@network.UCSD.EDU
Subject: Labelling of layers in Ionisphere
To: info-hams@ucsd.edu

In article <C8HDF0.35q@freenet.carleton.ca>,
ab376@Freenet.carleton.ca (Mike Ligeza) writes:

>
>In a previous article, fkf1@cornell.EDU (F. Kevin Feeney) says:
>
>>where are A, B, and C?" Stumped me. Our best collective guess was that
>>there might be lower layers with those designations but that they don't
>>affect radio so we never talk about them. Can anyone enlighten me? (and the
>>class)
>>
>I'm not sure that the answer is that esoteric.
>According to T.W. Bennington in "Short Wave Radio and the Ionospheres" in
>1925 when Sir Edward Appleton discovered the relective properties of one
>of the layers decided to call it the F Layer, in order to leave several
>letters at the disposal of future workers for allocation to others layers

>which they might discover.

>Regards

>--

>Mike Ligeza - VE3UIL

>Ottawa, Ontario

>Canada

Appleton began using the symbol E with a arrow (vector) over it -- this being standard engineering notation for an electric field -- to represent the ionosphere. His initial work dealt with what came to be known as the "E layer". Subsequently higher and lower layers were discovered in the ionosphere, and Appleton called them D and F. This is well documented in Appleton's published works.

-- 73 de Chris Thomas, AA6SQ (ex-WA6HTJ) (CSMSCST@MVS.OAC.UCLA.EDU)

Date: 12 Jun 1993 13:23:44 +0300

From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!agate!doc.ic.ac.uk!
warwick!uknet!mcsun!news.funet.fi!butler.cc.tut.fi!lehtori.cc.tut.fi!not-for-mail@network.UCSD.EDU

Subject: SB200 power supply problems - help please.

To: info-hams@ucsd.edu

alanb@sr.hp.com (Alan Bloom) wrote:

> F. Kevin Feeney (fkf1@cornell.EDU) wrote:

> : A buddy of mine has a 20 year old SB200 amplifier. He was having some
> : problems with low plate voltage (1800 vs a quote of 2400 in the manual) and
> : sometimes no idling or low idling current. Then it went bang and took out a
> : string of 3 of the caps in one leg of the supply. We found shorted caps -
> : checked the diodes with an electronic ohmmeter and they seemed to still be
> : ok. (diode test mode)

I haven't seen the SB200 but the plate voltage suggests that the PIV rating for the diode should be 3 kV if a bridge rectifier is used or 6 kV if a full wave center-tap circuit is used.

..

> : Well [new] caps got installed, tubes were left out in the interest of keeping
> : things going bang to a minimum, and the supply was fired up. A humming
> : noise, a "fffft-pop" and 4 seconds later the power was shut off by him.
> : Result was 2 caps too hot to touch, and now acting like "not capacitors"
> : and 4 left that still seem to be ok.

How many capacitors are there in a string. If you replace a string with generally available 450 V types, you need 6 in series for 2400 V.

Did you check the bleeder resistors across each capacitor. If you have

an open circuit in one resistor, the voltage across that capacitor becomes 2400 V, which will blow the capacitor. If it goes short circuit, the voltage across the rest of the capacitors in this string will exceed the maximum rating, and the rest will blow one after the other.

For 450 V capacitors, connect a 39 K (or less) resistor across each capacitor.

> : Questions:

> :

> : 1: We figure now to replace all the diodes just in case - anyone know their
> : ratings? They have heath part numbers on them. What's an IN400X equivalent?
> : I'm guessing they should be something like 400 PIV, 1-2 amps - but I'm sure
> : somebody out there has done this before.

> 1N4004 are 1 kV, 1A diodes. That's probably what you want.

1N4004 is a 400 V, 1A diode. 1N4007 is 1kV, 1 A

I don't know what the current rating should be in SB200, but if you are going to use 1 kV PIV diodes, you must connect at least 3 in series (assuming bridge rectifier or 6 if you have a center tapped transformer). To evenly distribute the reverse voltage across each diode in series, connect a 470 k resistor across each diode. To evenly distribute the voltage during diode turn-off, connect also a 10 nF capacitor across each diode. This will also reduce the RF-radiation from the diodes, when the diodes abruptly turn on and off during each half cycle.

Check for adequate _voltage_ and power ratings for the resistors connected across the electrolytics (500 V/10 W) and for the resistors connected across the diodes (1000 V/5W).

Paul OH3LWR

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Date: Sat, 12 Jun 1993 00:19:04 GMT
From: netcon!bongo!julian@locus.ucla.edu
Subject: VHF Ant Meas - More
To: info-hams@ucsd.edu

I dug up the results from the Antenna measurements made at the 1991 and 1992 conferences, so here they are:

1991 West Coast VHF/UHF Conference

Antenna Range Results

May 5, 1991, Holiday Inn, Ventura CA

10 GHz Reference: 22 dBi FXR horn

WA6QYR	21" Dish	32.5 dBi
WA6EXV	23" Dish, penny feed	34.0 dBi
WA6EXV	AEL 5301 16.6 dBi standard horn	13.0 dBi

2304 MHz Reference: 8.3 dBi 1 lb Coffee can

W6HDO	400 MHz Discone	-3.7 dBi
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1296 MHz Reference: 7.3 dBi 3 lb Coffee can

K6LMN	44 element KLM	19.3 dBi
WB9KMO	CA1243Z Comet vertical	5.3 dBi
WA6JGW	5 element Hand Held Yagi, Comet	7.8 dBi

903 MHz Reference: 11.7 dBi Corner reflector

WB20DH	23 element Loop Yagi	17.7 dBi
K6LMN	23 element Tonna	16.9 dBi

432 MHz Reference: 10.75 dBi Corner reflector

K6LMN	19 element RIW clone	17.7 dBi
K6LMN	2 element "V"	11.2 dBi
AA6PA	11 element Yagi	12.7 dBi
WB9KMO	CA1243Z Comet vertical	5.5 dBi
N3CFX	J-pole	-5.2 dBi

144 MHz Reference: 10.5 dBi 4 element Yagi

W6YLZ	Big wheel	0.5 dBi
K6LMN	2 element "V"	9.8 dBi
KD6LI	6 element Quad	11.2 dBi
AA6PA	3 element Yagi	9.5 dBi
N6RMJ	M-squared Scoop	2.5 dBi
KI6CR	2 element Quad	6.5 dBi
N3CFX	3 element Yagi	5.0 dBi

Range length: 225 feet.

Range surface: Concrete parking garage roof

Rangemaster: Steve Noll, WA6EJO

Assistant: Pat Coker, N6RMJ

Sponsor: Ventura County Amateur Radio Club (K6MEP)

1992 West Coast VHF/UHF Conference

Antenna Range Results

May 17, 1992, Holiday Inn, Ventura CA

10 GHz Reference: 22 dBi FXR horn

WA6BAN	Feed Horn	15.5 dBi
W6ASL	Lambda Vector 12 slot Omni	10.0 dBi

2304 MHz Reference: 8.3 dBi 1 lb Coffee can

WB20DH 2304 MHz Dish with tri-band feed 9.3 dBi

1296 MHz Reference: 7.3 dBi 3 lb Coffee can

N6RPM	KLM 1.2-44-LBX	18.3 dBi
K6MYC	23cm 35SQ	17.3 dBi
K6MYC	24 element DL6WU Yagi	16.8 dBi
K6MYC	35 element CM35EZ	15.8 dBi
WB9COY	21 element Yagi	14.3 dBi
K6LMN	Modified DJ7FY Heart	8.3 dBi

903 MHz Reference: 11.7 dBi Corner reflector

K6LMN	Modified DJ7FY Heart	11.0 dBi
KC6ACX	925 MHz Loop Yagi	plot only
WB20DH	25 element Loop Yagi	plot only

432 MHz Reference: 7.7 dBd NBS-design Reference

WB9COY	7 element Yagi	15.7 dBd
K6MYC	420-450-5	11.7 dBd
K6MYC	NBS-design Reference #2	7.7 dBd
K6LMN	Modified DJ7FY Heart	3.7 dBd
N6BVL	440 J-Pole	plot only
K6MYC	NBS-design Reference #1	plot only

144 MHz Reference: 10.5 dBi 4 element Yagi

W7Z	5 element homebrew Yagi	11.0 dBi
WB9COY	3 element Yagi	9.5 dBi
WB6CYP	Quag-V	6.5 dBi
K6MYC	M2 SQLoop	3.0 dBi
KD6DUV	3 element ground plane	plot only
K6LMN	Modified DJ7FY Heart	plot only
KD6DSS	3 element Yagi, vertical	plot only

Range length: 225 feet.

Range surface: Concrete parking garage roof

Rangemaster: Steve Noll, WA6EJO

Assistant: Pat Coker, N6RMJ

Sponsor: Ventura County Amateur Radio Club (K6MEP)

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Julian Macassey, N6ARE julian@bongo.tele.com Voice: (213) 653-4495

Paper Mail: 742 1/2 North Hayworth Avenue, Hollywood, California 90046-7142

Date: Fri, 11 Jun 1993 23:51:44 GMT
From: netcon!bongo!julian@locus.ucla.edu
Subject: West Coast VHF Conf Ant Meas
To: info-hams@ucsd.edu

I recently mentioned the 1993 West Coast VHF Antenna Contest.
Below are the results. Many thanks to Steve Noll, WA6EJO for
supplying these.

1993 WEST COAST VHF/UHF CONFERENCE ANTENNA RANGE RESULTS

1296 MHz (23 Cms) Reference: 7.3 dBi Coffee Can

K6HXW	Loop Yagi	18o	19.0	dBi
N6RPM	M2 23EZ	24o	15.45	dBi
KC6SYE	Black Beam	25o	15.5	dBi
WB9COY	16 el Yagi	34o	15.3	dBi
W6NBI	Short Backfire	29o	14.3	dBi

903 MHz (33 Cms) Reference: 11.7 dBi Corner Reflector

N6RPM	DEM-903-19	28o	21.5	dBi
K6MYC	M2 902-18 Flat Elements	31o	16.7	dBi
K6MYC	M2 902-18 Round Elements	30o	n/a	

432 MHz (70 Cms) Reference: 10.75 dBi Corner Reflector

KC6WLC	M2 28 element 432-9WL	25o	21.25	dBi
K3IPW	Rutland F033-432 33 el Yagi	24o	21.0	dBi
KC6WLC	M2 432 18 element	30o	18.75	dBi
K6SPK	Tonna F9FT 21 element	27o	18.45	dBi
W6IST	Homebrew 14 el Yagi	34o	17.55	dBi
KD6BLS	7 element Log Periodic	58o	15.25	dBi
WB6CYP	10 el Quag-V	39o	15.0	dBi
WB9COY	COY4347EL	43o	15.0	dBi
K6LMN	1.5 wavelength Homebrew Horn	29o	11.25	dBi

434 MHz Vertical Polarization

N6HNR	56 element colinear YGX/ZGJ	19o	20.0	dBi
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440 MHz Vertical Polarization

KD6PWV	12 element Yagi	38o	11.0	dBi
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222 MHz (1.3M) Reference: 13.2 dBi 7 element Yagi

K3IPW	Rutland F016-222 16 element Yagi	35o	16.8	dBi
KD6BLS	5 element log periodic	66o	10.4	dBi

144 MHz (2 M) Reference: 10.5 dBi 4 element Yagi

K3IPW	Rutland F015-144 15 element Yagi	39o	17.8	dBi
WB9COY	COY2M12EL	44o	15.5	dBi

KD6BLS	5 element log periodic	740	10.5	dBi
K6LMN	Half-wave Horn-Yagi	740	9.8	dBi
KD6RDR	5 element Vertical Yagi	1010	9.1	dBi
SM6MOM	2 element HB9CV	750	8.5	dBi
W6DYI	2 element Quad	800	7.7	dBi
K6AAW	Turnstile	n/a	4.0	dBi
W6DYI	Coaxial Vertical	n/a	-3.0	dBi

Portable plotting antenna range by Steve J. Noll, WA6EJ0

Range length: 225'

Range surface: Concrete parking garage roof.

Reference antenna gains measured by two-identical-antenna method.

--

Julian Macassey, N6ARE julian@bongo.tele.com Voice: (213) 653-4495

Paper Mail: 742 1/2 North Hayworth Avenue, Hollywood, California 90046-7142

Date: Sat, 12 Jun 1993 02:43:00 GMT

From: usc!wupost!news.miami.edu!usenet.ufl.edu!zeno.fit.edu!zach.fit.edu!

ree88132@network.UCSD.EDU

To: info-hams@ucsd.edu

References <dmcreyno-110693082520@134.5.142.4>, <C8Gr62.5Lr@zeno.fit.edu>, <dmcreyno-110693144640@134.5.142.4>0

Subject : Re: Digital microwave project

In article <dmcreyno-110693144640@134.5.142.4> dmcreyno@hercii.lasc.lockheed.com (David McReynolds) writes:

>In article <C8Gr62.5Lr@zeno.fit.edu>, ree88132@zach.fit.edu (Keith Ledig)

>wrote:

>>

>> My intent of this question is exactly as stated. Can I use one
 >> dish/horn as a transmitter AND a receiver at the same time
 >> simultaneously. The reason I ask is because we have a couple
 >> horns here that are either a transmitter or a receiver. The
 >> diode in the center of the horn does only one job.

>>

>>

>Well, if your horns have diodes then you probably will need 2 xmit and 2
 >rcv antennas to do full duplex. I'm sorry, I thought you might have enough
 >common sense to realize that you cannot transmit through a receive only
 >antenna and you cannot receive through a transmit only antenna.

>

Well, cellular phone is close to microwave (upper mhz range) and

those little antennas can transmit and receive simultaneously.

I also thought they had dish antennas that could trandmit and receive
(on separate frequencies or different planes of polarization).
and same for horns.

End of Info-Hams Digest V93 #718
